Industry Canada Industrie Canada

Sector Competitiveness Frameworks

Pharmaceutical Industry Highlights

Industry Sector / Secteur de l'industrie
Health Industries / Industries de la santé

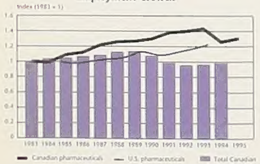
Canada

HIGHLIGHTS

The pharmaceutical industry is an important contributor to the Canadian economy and an integral part of Canada's health care system . . .

- The pharmaceutical work force is highly educated, with over 50 percent of personnel having university degrees. The average wage in the industry was $48 000 a year in 1994, which was 30 percent higher than the average in Canada's total manufacturing sector.
- The human resources available to the industry are internationally competitive. Skill levels are adequate, and there are enough available people in all key scientific and manufacturing occupations.

Employment Growth



Source: Statistics Canada, CANSIM, D662150 and D667760; U.S. Department of Commerce, National Economic, Social and Environmental Data Bank, Series 51-SIC 283; 1996.

- The industry accounts for 1 percent of manufacturing employment and 10 percent of private sector research and development (R&D).

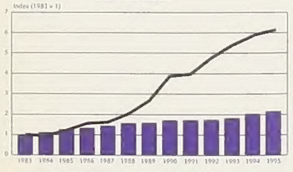
MAJOR TRENDS

- The pharmaceutical industry is going through a major restructuring worldwide. The rising cost of health care in developed countries has caused governments to introduce measures to restrain its growth. This has led to constraints on drug sales volumes and prices.
- On the supply side, enhanced productivity is essential for innovative companies to afford the rising cost of R&D needed to discover new drugs. Many major multinational companies have engaged in mergers to increase their financial capacity.
- At the same time, companies producing generic drugs have been growing rapidly. This is partly in response to the government and private sector measures designed to reduce health care costs by encouraging consumers to switch to lower-priced drugs, where possible, but also in response to the need for inexpensive, effective medications in less developed countries.

Canadian R&D expenditures by multinational brand-name companies have been increasing at a time when drug manufacturing capacity in Canada has been falling . . .

- The brand-name sector contributes far above the average among Canadian manufacturing industries to R&D funding, dedicating around 12 cents per sales dollar in recent years.
- Manufacturing by generic drug companies also is on a growth track as the key companies adopt internationally oriented strategies embracing both domestic investment for exports and foreign direct investment. Bio-pharmaceutical R&D is increasingly important in the strategies of both brand-name multinational and generic domestic companies.

Intramural R&D

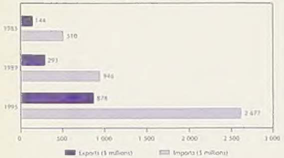


Source: PMPRB, *Annual Reports*; Statistics Canada, *Industrial Research and Development*, Catalogue No. 88-202, annual.

Canada's pharmaceutical manufacturers traditionally have not been positioned as exporters . . .

- However, this is beginning to change, especially since the 1994 implementation of tariff phase-outs through the North American Free Trade Agreement (NAFTA) and the 1995 implementation of the World Trade Organization (WTO).
- Currently, Canadian subsidiaries of multinational drug producers export less than 10 percent of their Canadian shipments. In contrast, Canadian generic drug producers export 40 percent of their output.
- There is a growing deficit in pharmaceutical goods trade, which reached $1.8 billion in 1995. However, as a proportion of total pharmaceutical trade flows (exports plus imports), the deficit is declining slowly.

Canadian Trade in Pharmaceuticals



Source: Statistics Canada, On-line Industrial Monitor database.

- Because Canada's domestic market is expected to grow less quickly over the next five years than in the past, generic and some brand-name companies are looking to export markets to sustain growth. The U.S. market as well as some of the developing markets are the focus of attention.
- The industry's service exports include transfers of information technology expertise, the performance of clinical trials and pharmaco-economic studies. On the import side, management consulting services are sometimes purchased from foreign sources.
- With respect to capital flows, there is significant inward foreign direct investment in the brand-name multinationals, and there is some outward foreign direct investment on the part of the generic companies.

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Aussi disponible en français sous le titre : L'industrie pharmaceutique : Partie 1 — Vue d'ensemble et perspectives.

Sector Competitiveness Frameworks are a new series of documents produced by Industry Canada in collaboration with Canada's key industry stakeholders. Each framework will examine a major Canadian industry sector, and will be prepared in two volumes. *Part 1 — Overview and Prospects* focusses on the opportunities, both domestic and international, as well as on the challenges facing industry sectors in Canada. *Part 2 — Framework for Action* will be based on discussions with major industrial stakeholders, following study and review of the *Overview and Prospects*.

The objective of the **Sector Competitiveness Frameworks** series is to seek ways in which government and private industry together can strengthen Canada's competitiveness and, in doing so, generate jobs and growth.

In all, some 28 industrial sectors will be analyzed. Electronic copies of documents in the series are available on the Internet at the following address: http://strategis.ic.gc.ca/scf

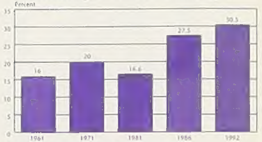
Innovation in the industry centres on the discovery and development of new drugs . . .

- The Patented Medicine Prices Review Board (PMPRB) reports that pharmaceutical patent holders in Canada in 1995 spent in the order of $620 million on R&D. Since the cost of discovering and developing a single new drug is often in excess of $400 million, it is not surprising that Canadian-based firms have not as yet been solely responsible for many new drug discoveries.
- Key success factors in promoting R&D include the degree of patent protection available, the R&D tax credit system, the availability of leading researchers in universities and centres of excellence, direct funding of R&D, and the ability of Canada's multinational subsidiaries to convince their parent companies that their R&D capabilities make it an attractive place to invest.

The global restructuring drive of the multinationals has affected the investment behavior of their subsidiaries in Canada and elsewhere . . .

- Worldwide consolidation of major companies has resulted in the sale or shutdown of some manufacturing capacity in Canada. At the same time, new investments, often in R&D facilities, have been made. The growth of the generic companies has made a significant contribution to the aggregate investment performance of the industry.
- The industry has achieved fairly good levels of profitability over the past several years, partly based on strong growth of sales in the domestic market. Sales growth in Canada is now slowing and, over the next five years, aggregate sales in Canada are expected to continue on a reduced growth track.
- Investment in Canada by multinationals is driven by the allocation of R&D and manufacturing mandates based on corporate judgments about how well Canadian capabilities and opportunities fit into the companies' global strategies.
- A factor in Canada's favour is the existing relative advantage over U.S. locations in the cost of construction and operation of new facilities.

Profit Margin as a Share of Gross Output



Source: Statistics Canada, Input-Output tables, special run.

Indeed, Canada has recently been chosen for regional/world product mandates by a number of companies.

- With respect to generics, the decision to invest depends partly on the growth in the domestic market and partly on their ability to serve international markets. Some generic companies are investing in Canada for export while others are making direct foreign investments, particularly in the U.S. market.
- Key success factors in attracting new investments include intellectual property protection, access to domestic provincial markets, access to foreign markets (including mutual recognition agreements) and the speed of regulatory approval of new products.
- A new federal investment strategy, which seeks to make Canada the NAFTA location of choice, targets the life sciences industry (including pharmaceuticals) as a priority sector.

The industry has a reputation as being clean and environmentally friendly . . .

- Health Canada has the responsibility of ensuring that therapeutic drugs entering the Canadian marketplace are safe for use. Increasingly, however, post-market disposal of unused drugs is becoming an issue. For example, the Province of British Columbia has introduced the idea that pharmaceutical companies bear some responsibility for the safe disposal of unused drugs, and the Province of Quebec is moving toward a voluntary code of behavior.
- The only significant pollution comes from solvents (used on pill coatings) emitted into the air by some major manufacturing plants. While the amount of packaging typically used is large relative to the unit of product sold, the industry feels that it is difficult to reduce because of the requirements by regulatory bodies for product information on labels.
- Another important factor affecting development of the industry is the *Canadian Environmental Protection Act* (CEPA), which regulates the manufacture and importation of biotechnology products that are not covered by the *Health Canada Act* or other specialized Acts.

THE BOTTOM LINE

The pharmaceutical industry has the potential to make a significant contribution to Canada's economic future . . .

- Companies in Canada are in the process of evolving toward a truly global role. Multinational subsidiaries in Canada are no longer strictly branch plant operations mandated to serve only the domestic market. They compete for R&D mandates aggressively and, depending on their competitiveness, attain certain levels of success in obtaining regional or global manufacturing mandates for niche products.
- Generic companies have been quite successful in achieving growth in the domestic market. They are moving to penetrate established markets by forging strong alliances and aggressively targeting emerging markets.

For further information concerning the subject matter contained in these Highlights, please contact:

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